

OM protein - protein search, using sw model

Run on: January 27, 2009, 15:05:50 ; Search time 1 Seconds
(without alignments)
1.259 Million cell

updates/sec

Title: US-10-983-128-6016
Perfect score: 1731
Sequence: 1 MSDRQAALDMALKQIEKQFG.....TGGAAPAQEDEAQAQEELEF 348

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 10 seqs, 3617 residues

Total number of hits satisfying chosen parameters: 10

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : US10593425.pep:*

Pred. No. is the number of results predicted by chance to have a
score greater than or equal to the score of the result being
printed,
and is derived by analysis of the total score distribution.

SUMMARIES

| Result No. | Score | % Query Match | Length | DB | ID | Description |
|---------------|-------|---------------------|--------|----|------------------|--------------|
| ---- | | | | | | |
| Appl 1 | 1731 | 100.0 | 348 | 1 | US-10-593-425-32 | Sequence 32, |
| Appli 2 | 1718 | 99.2 | 348 | 1 | US-10-593-425-2 | Sequence 2, |
| Appli 3 | 73 | 4.2 | 492 | 1 | US-10-593-425-8 | Sequence 8, |
| Appli 4 | 64 | 3.7 | 425 | 1 | US-10-593-425-10 | Sequence 10, |
| Appl 5 | 60.5 | 3.5 | 500 | 1 | US-10-593-425-12 | Sequence 12, |
| Appli 6 | 52 | 3.0 | 398 | 1 | US-10-593-425-6 | Sequence 6, |
| Appli 7 | 48 | 2.8 | 264 | 1 | US-10-593-425-16 | Sequence 16, |
| Appl 8 | 44 | 2.5 | 398 | 1 | US-10-593-425-4 | Sequence 4, |
| Appli | | | | | | |

| | | | | | | |
|------|------|------|-----|-----|------------------|------------------|
| 9 | 42.5 | 2.5 | 288 | 1 | US-10-593-425-18 | Sequence 18, |
| Appl | 10 | 34.5 | 2.0 | 156 | 1 | US-10-593-425-14 |
| Appl | | | | | | Sequence 14, |

ALIGNMENTS

RESULT 1
US-10-593-425-32
; Sequence 32, Application US/10593425
; GENERAL INFORMATION:
; APPLICANT: Feesche, Jorg
; APPLICANT: Meinhardt, Friedhelm
; APPLICANT: Nahrstedt, Hannes
; APPLICANT: Waldeck, Jens
; APPLICANT: Groene, Mark
; APPLICANT: Eichstadt, Renee
; TITLE OF INVENTION: Factor RecA From Bacillus Licheniformis and RecA-inactivated
; TITLE OF INVENTION: Safety Stems Used for Biotechnological Production
; FILE REFERENCE: H 06291 (13744*21)
; CURRENT APPLICATION NUMBER: US/10/593,425
; CURRENT FILING DATE: 2006-09-19
; PRIOR APPLICATION NUMBER: PCT/EP05/001543
; PRIOR FILING DATE: 2005-02-16
; PRIOR APPLICATION NUMBER: DE 10 2004 013 988.1
; PRIOR FILING DATE: 2004-03-19
; NUMBER OF SEQ ID NOS: 32
; SOFTWARE: PatentIn version 3.3
; SEQ ID NO 32
; LENGTH: 348
; TYPE: PRT
; ORGANISM: Bacillus licheniformis A
US-10-593-425-32

Query Match 100.0%; Score 1731; DB 1; Length 348;
Best Local Similarity 100.0%; Pred. No. 0;
Matches 348; Conservative 0; Mismatches 0; Indels 0;
Gaps 0;

Qy 1
MSDRQAALDMALKQIEKQFGKGSIMKLGEQTETRISTVPSGSLALDAALGVGGYPRGRII 60
|||||
Db 1
MSDRQAALDMALKQIEKQFGKGSIMKLGEQTETRISTVPSGSLALDAALGVGGYPRGRII 60
Qy 61
EYVGPESSGKTTVALHAIAEVQQGGQAAFIDAEHALDPVYAQKLGVNIDELLSQPDGTG 120
|||||
Db 61
EYVGPESSGKTTVALHAIAEVQQGGQAAFIDAEHALDPVYAQKLGVNIDELLSQPDGTG 120
Qy 121
EQALEIAEALVRSGAVDIVVIDSVAALVPKAEIEGDMGDSHVGLQARLMSQALRKLSGAI 180

|||||
 Db 121
 EQALEIAEALVRSGAVDIVVIDSVAALVPKAEIEGDMGDSHVGLQARLMSQALRKLSGAI 180

Qy 181
 NKSKTIAIFINQIREKVGVMFGNPETTPGGRALKFYSSVRLEVRRAEQLKQGNVDMGNKT 240

|||||
 Db 181
 NKSKTIAIFINQIREKVGVMFGNPETTPGGRALKFYSSVRLEVRRAEQLKQGNVDMGNKT 240

Qy 241
 KIKVVKNKVAPPFRTAEVDIMYEGISKEGEIIDLGTELDIVQKSGAWYSYQEERLGQGR 300

|||||
 Db 241
 KIKVVKNKVAPPFRTAEVDIMYEGISKEGEIIDLGTELDIVQKSGAWYSYQEERLGQGR 300

Qy 301 ENAKQFLKENKDILLMIQEQUIREHYGLDTGGAAPAQEDEAAQAELEF 348
 |||||
 Db 301 ENAKQFLKENKDILLMIQEQUIREHYGLDTGGAAPAQEDEAAQAELEF 348

RESULT 2

US-10-593-425-2

; Sequence 2, Application US/10593425

; GENERAL INFORMATION:

; APPLICANT: Feesche, Jorg

; APPLICANT: Meinhardt, Friedhelm

; APPLICANT: Nahrstedt, Hannes

; APPLICANT: Waldeck, Jens

; APPLICANT: Groene, Mark

; APPLICANT: Eichstadt, Renee

; TITLE OF INVENTION: Factor RecA From Bacillus Licheniformis and RecA-inactivated

; TITLE OF INVENTION: Safety Stems Used for Biotechnological Production

; FILE REFERENCE: H 06291 (13744*21)

; CURRENT APPLICATION NUMBER: US/10/593,425

; CURRENT FILING DATE: 2006-09-19

; PRIOR APPLICATION NUMBER: PCT/EP05/001543

; PRIOR FILING DATE: 2005-02-16

; PRIOR APPLICATION NUMBER: DE 10 2004 013 988.1

; PRIOR FILING DATE: 2004-03-19

; NUMBER OF SEQ ID NOS: 32

; SOFTWARE: PatentIn version 3.3

; SEQ ID NO 2

; LENGTH: 348

; TYPE: PRT

; ORGANISM: Bacillus licheniformis DSM 13

US-10-593-425-2

Query Match 99.2%; Score 1718; DB 1; Length 348;
 Best Local Similarity 99.4%; Pred. No. 0;
 Matches 346; Conservative 1; Mismatches 1; Indels 0;
 Gaps 0;

Qy 1
 MSDRQAALDMALKQIEKQFGKGSIMKLGEQTETRISTVPSGSLDALDAALGVGGYPRGRII 60

```

|||||
Db      1
MSDRQAALDMLKQIEKQFGKGSIMKLGEQTETRISTVPSGSLDALDAALGVGGYPRGRII 60

Qy      61
EVYGPESGKTTVALHAI AEVQQQGGQAAAFIDAEHALDPVYAQKLGVNIDELLSSQPD TG 120
|||||
Db      61
EVYGPESGKTTVALHAI AEVQQQGGQAAAFIDADTALDPVYAQKLGVNIDELLSSQPD TG 120

Qy      121
EQALEIAEALVRSGAVDIVVIDSVAALVPKAEIEGDMGDSHVGLQARLMSQALRKLSGAI 180
|||||
Db      121
EQALEIAEALVRSGAVDIVVIDSVAALVPKAEIEGDMGDSHVGLQARLMSQALRKLSGAI 180

Qy      181
NKSKTIAIFINQIREKVGVMFGNPETTPGGRALKFYSSVRLEVRRAEQLKGNDVMGNKT 240
|||||
Db      181
NKSKTIAIFINQIREKVGVMFGNPETTPGGRALKFYSSVRLEVRRAEQLKGNDVMGNKT 240

Qy      241
KIKVVKNKVAPPFRTAEVDIMYEGISKEGEIIDLGTELDIVQKSGAWYSYQEERLQQR 300
|||||
Db      241
KIKVVKNKVAPPFRTAEVDIMYEGISKEGEIIDLGTELDIVQKSGAWYSYQEERLQQR 300

Qy      301 ENAKQFLKENKDILLMIOEQIREHYGLDTGGAAPAQEDEAQAQEELEF 348
Db      301 ENAKQFLKENKDILLMIOEQIREHYGLDTGGAAPAQEDEAQAQEELEF 348

```

RESULT 3

US-10-593-425-8

; Sequence 8, Application US/10593425

; GENERAL INFORMATION:

; APPLICANT: Feesche, Jorg

; APPLICANT: Meinhardt, Friedhelm

; APPLICANT: Nahrstedt, Hannes

; APPLICANT: Waldeck, Jens

; APPLICANT: Groene, Mark

; APPLICANT: Eichstadt, Renee

; TITLE OF INVENTION: Factor RecA From Bacillus Licheniformis and RecA-inactivated

; TITLE OF INVENTION: Safety Stems Used for Biotechnological Production

; FILE REFERENCE: H 06291 (13744*21)

; CURRENT APPLICATION NUMBER: US/10/593,425

; CURRENT FILING DATE: 2006-09-19

; PRIOR APPLICATION NUMBER: PCT/EP05/001543

; PRIOR FILING DATE: 2005-02-16

; PRIOR APPLICATION NUMBER: DE 10 2004 013 988.1

; PRIOR FILING DATE: 2004-03-19

; NUMBER OF SEQ ID NOS: 32

; SOFTWARE: PatentIn version 3.3

; SEQ ID NO 8
; LENGTH: 492
; TYPE: PRF
; ORGANISM: Bacillus subtilis
US-10-593-425-8

Query Match 4.2%; Score 73; DB 1; Length 492;
Best Local Similarity 19.0%; Pred. No. 0;
Matches 58; Conservative 57; Mismatches 109; Indels 82;
Gaps 13;

Qy 73
VALHAIAEVQQGGQAAAFIDAHEHALDPVYAQKLGVNIDELLLSQPDTGEQALEIAEALVR 132
: | ||: | | ||: | | |:: | | : | |
Db 127 IPFHEAAEI----GTRKVIQ-EHSTIGVVITDGTIGD---
IARSDYIEAEERVIEELKE 178

Qy 133 SGAVDIVVIDSVAALVPKAE-IEGDMGDSH-----
VGLQARLMSQALRKLSGAINSKT 185
| |::|| | : : : : : : : | | | : :
Db 179
VGKPFIMVINSVRPHYPETEAMRQDLSEKYDIPVLAMSVESMRESVLSVLREALYFPV 238

Qy 186 IAIFIN-----
QIREKVGVMFNGPETTPGGRALKFYSSVRLEVRRAEQLKQGN 233
: : : | : | : | : | : : : :
Db 239 LEVNVNLPSPWVMVLKENHWLRE-----
SYQESVKETVKDIKRLRDVD 280

Qy 234
DVMGNKTKIKVVKNKVAPPFRTAEVDIMYEGEGISKEGEIIDLGTELDIVQKSGAWYSYQE 293
| : | : : : : | | : : : : : : :
Db 281 RVVGQFSEFEFIES-----AGLAGIELGQGVA-----
EIDLAPDHLVDQILK 323

Qy 294 ERLG---QGRE-----
NAKQFLKENKDILLMIQEQIREHYGLDTGGAAPAQDEA 340
| : | : ||: : || : | | : : : | : | || | |
Db 324 EVVGVEIRGRDHLLLMQDFAHAKTEYDQVSDALKMVKQ---TGYGI---
AAPALADMS 376

Qy 341 QAQEEL 346
: | :
Db 377 LDEPEI 382

RESULT 4
US-10-593-425-10
; Sequence 10, Application US/10593425
; GENERAL INFORMATION:
; APPLICANT: Feesche, Jorg
; APPLICANT: Meinhardt, Friedhelm
; APPLICANT: Nahrstedt, Hannes
; APPLICANT: Waldeck, Jens
; APPLICANT: Groene, Mark
; APPLICANT: Eichstadt, Renee
; TITLE OF INVENTION: Factor RecA From Bacillus Licheniformis and RecA-

LEEEAKIIRMIFNYFTDHSKSPFFGRVNGIALHLTQMGVTKKGAKVWHR 215

Qy 290 -----SYQEERLQGQRENAKQFLKE---
NKDILLMIQEIQIREHYGLDTGGAAPAQ 336

||: | : : : || : : | : | :

Db 216 QVVRQILMNSSYKGEHRQYKYDTEGSYVSKQAGNKSIIKIRPEE--
EQITVTIPAIVPAE 273

Qy 337 E-DEAQ 341

: | ||

Db 274 QWDYQAQ 279

RESULT 6

US-10-593-425-6

; Sequence 6, Application US/10593425

; GENERAL INFORMATION:

; APPLICANT: Feesche, Jorg

; APPLICANT: Meinhardt, Friedhelm

; APPLICANT: Nahrstedt, Hannes

; APPLICANT: Waldeck, Jens

; APPLICANT: Groene, Mark

; APPLICANT: Eichstadt, Renee

; TITLE OF INVENTION: Factor RecA From Bacillus Licheniformis and RecA-
inactivated

; TITLE OF INVENTION: Safety Stems Used for Biotechnological
Production

; FILE REFERENCE: H 06291 (13744*21)

; CURRENT APPLICATION NUMBER: US/10/593,425

; CURRENT FILING DATE: 2006-09-19

; PRIOR APPLICATION NUMBER: PCT/EP05/001543

; PRIOR FILING DATE: 2005-02-16

; PRIOR APPLICATION NUMBER: DE 10 2004 013 988.1

; PRIOR FILING DATE: 2004-03-19

; NUMBER OF SEQ ID NOS: 32

; SOFTWARE: PatentIn version 3.3

; SEQ ID NO 6

; LENGTH: 398

; TYPE: PRT

; ORGANISM: Bacillus subtilis

US-10-593-425-6

Query Match 3.0%; Score 52; DB 1; Length 398;
Best Local Similarity 22.9%; Pred. No. 0;
Matches 43; Conservative 25; Mismatches 78; Indels 42;
Gaps 9;

Qy 142
DSVAALVPKAEIEGDMGDSHVGLQARLMSQALRKLSGAINKSKTIAIFINQIREKVGVMF 201

| : ||| | : | | : : : | :

Db 233 DHQQEVASKAEIYG-----ETWYRSEVTVPLETLFN-----
VYTGKVRTKHKLSF 277

Qy 202
GNPETTPGGRALKFYSSVRLEVRRAEQLKQGNDVMGNKTKIKVVKNKVAPPFRTAEVDIM 261

| : | | : : || : | : | : | :

Db 278 GSLAIPWGMTFK--KEELKHPKTEQEKHSLHLFGKFLPVSYVKEQT----
RESE---- 326

Qy 262 YGEGISK--EGEIIDLGTTEL---DIVQKSGAWYSYQEER-
LGQGRENAKQFLKENKDILL 315

Db 327 --EALRKYTKEEAVQEGIKLGKQDVEDKIGENGEVKSEKVLHQTVENGK-----
VKL 376

Qy 316 MIQEQUIRE 323

Db 377 IILYQVIE 384

RESULT 7

; Sequence 16, Application US/10593425

; APPLICANT: Feesche,

; APPLICANT: Nahrstedt, Hannes

; APPLICANT: Groene, Mark

; TITLE OF INVENTION: Factor R

; TITLE OF INVENTION: Safety Stems Used for Biotechnological

; FILE REF.

; CURRENT FILING DATE: 2006-09-19

; PRIOR FILING DATE: 2005-02-16

; PRIOR FILING DATE: 2004-03-19

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; SOFTWARE: PatentIn version 3.
```

; LENGTH: 264

; ORGANISM:

Best Local Sim

Gaps 7:

Ov 201

[illegible]

Db 126 FGNP-----LAFLAP---EHKNKEO-----

[illegible]

RESULT 8

US-10-593-425-4
 ; Sequence 4, Application US/10593425
 ; GENERAL INFORMATION:
 ; APPLICANT: Feesche, Jorg
 ; APPLICANT: Meinhardt, Friedhelm
 ; APPLICANT: Nahrstedt, Hannes
 ; APPLICANT: Waldeck, Jens
 ; APPLICANT: Groene, Mark
 ; APPLICANT: Eichstadt, Renee
 ; TITLE OF INVENTION: Factor RecA From Bacillus Licheniformis and RecA-
 inactivated
 ; TITLE OF INVENTION: Safety Stems Used for Biotechnological
 Production
 ; FILE REFERENCE: H 06291 (13744*21)
 ; CURRENT APPLICATION NUMBER: US/10/593,425
 ; CURRENT FILING DATE: 2006-09-19
 ; PRIOR APPLICATION NUMBER: PCT/EP05/001543
 ; PRIOR FILING DATE: 2005-02-16
 ; PRIOR APPLICATION NUMBER: DE 10 2004 013 988.1
 ; PRIOR FILING DATE: 2004-03-19
 ; NUMBER OF SEQ ID NOS: 32
 ; SOFTWARE: PatentIn version 3.3
 ; SEQ ID NO 4
 ; LENGTH: 398
 ; TYPE: PRF
 ; ORGANISM: Bacillus licheniformis
 US-10-593-425-4

Query Match 2.5%; Score 44; DB 1; Length 398;
 Best Local Similarity 18.2%; Pred. No. 0;
 Matches 52; Conservative 40; Mismatches 104; Indels 90;
 Gaps 12;

Qy 64 GPSSSGKITVALHAIAEVQQGGQAAFIADAEHALDPVYAQKLGVNIDELLSQPD---
 TG 120

| :| || : : :| | : | | : : :

Db 163 GIELNG---TALHMKVVEKNEPDKEKYIGPRHIV-----
 AKKGATISKFFVEKGEPLTV 214

Qy 121
 EQALEIAEALVRSQAVDIVVIDSVAALVPKAEIEGDMGDSHVGLQARLMSQALRKLSGAI 180
 | :| : || | | : | | : : : : :

Db 215 NQHVEKGQMLV-SGL-----
 IGSEEEKQKVGAKGKIYGETWYKSTIVTV 256

Qy 181 NKSKTIAIFINQIREKVGVMFGN-----PET---
 TPGGRALKFYSSVR 220
 : :| ::| : | : | :| | : |

|
 Db 257
 PLETSFDFVFTGKVRTSHKLSGSFSVPIWGFSPKKEDFSRPKTETENPSLHFMNFKLPVA 316

Qy 221 LE---
 VVRAEQLKQGNVDMGNKTKIKVKNKVAPPFRTAEVDIMYEGEGISKEGEIIDLGT 277
 | :| :||| : : | | : || : | :| ||
 Db 317 YEKEHMRSEQIK-----RVYSKKEAVLEGIEGMGRDIR--
 KKIGSDGNII--- 360

Qy 278 ELDIVQKSGAWYSYQEERLGQGRENKQFLKENKDILLMIQEIRE 323
 | : | : | | | : | : | : |
 Db 361 -----SEKVLHETSENGK-----VKLIILYQVIE 384

RESULT 9

US-10-593-425-18
 ; Sequence 18, Application US/10593425
 ; GENERAL INFORMATION:
 ; APPLICANT: Feesche, Jorg
 ; APPLICANT: Meinhardt, Friedhelm
 ; APPLICANT: Nahrstedt, Hannes
 ; APPLICANT: Waldeck, Jens
 ; APPLICANT: Groene, Mark
 ; APPLICANT: Eichstadt, Renee
 ; TITLE OF INVENTION: Factor RecA From Bacillus Licheniformis and RecA-
 inactivated
 ; TITLE OF INVENTION: Safety Stems Used for Biotechnological
 Production
 ; FILE REFERENCE: H 06291 (13744*21)
 ; CURRENT APPLICATION NUMBER: US/10/593,425
 ; CURRENT FILING DATE: 2006-09-19
 ; PRIOR APPLICATION NUMBER: PCT/EP05/001543
 ; PRIOR FILING DATE: 2005-02-16
 ; PRIOR APPLICATION NUMBER: DE 10 2004 013 988.1
 ; PRIOR FILING DATE: 2004-03-19
 ; NUMBER OF SEQ ID NOS: 32
 ; SOFTWARE: PatentIn version 3.3
 ; SEQ ID NO 18
 ; LENGTH: 288
 ; TYPE: PRT
 ; ORGANISM: Bacillus subtilis
 US-10-593-425-18

Query Match 2.5%; Score 42.5; DB 1; Length 288;
 Best Local Similarity 22.2%; Pred. No. 0;
 Matches 16; Conservative 14; Mismatches 31; Indels 11;
 Gaps 2;

Qy 54 YPRGRIIEVYGPESGKTTVALHAI AE-----
 VQQQGGQAAAFIDAEHALDPVYAQ 103

| : | : | | : : : | : : | :
 Db 215
 YGKNRELEKLLPLTVKAEDKVIHVMAEFKRGCKHPHIIIEKSGQKLSQLDENEVLHAYFAD 274

Qy 104 K-LGVNIDELL 114
 | : : : :
 Db 275 KRTNSSMEELL 286

RESULT 10

US-10-593-425-14
 ; Sequence 14, Application US/10593425
 ; GENERAL INFORMATION:
 ; APPLICANT: Feesche, Jorg
 ; APPLICANT: Meinhardt, Friedhelm
 ; APPLICANT: Nahrstedt, Hannes
 ; APPLICANT: Waldeck, Jens
 ; APPLICANT: Groene, Mark

```
; APPLICANT: Eichstadt, Renee
; TITLE OF INVENTION: Factor RecA From Bacillus Licheniformis and RecA-
inactivated
; TITLE OF INVENTION: Safety Stems Used for Biotechnological
Production
; FILE REFERENCE: H 06291 (13744*21)
; CURRENT APPLICATION NUMBER: US/10/593,425
; CURRENT FILING DATE: 2006-09-19
; PRIOR APPLICATION NUMBER: PCT/EP05/001543
; PRIOR FILING DATE: 2005-02-16
; PRIOR APPLICATION NUMBER: DE 10 2004 013 988.1
; PRIOR FILING DATE: 2004-03-19
; NUMBER OF SEQ ID NOS: 32
; SOFTWARE: PatentIn version 3.3
; SEQ ID NO 14
; LENGTH: 156
; TYPE: PRN
; ORGANISM: Bacillus subtilis
US-10-593-425-14
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Query Match 2.0%; Score 34.5; DB 1; Length 156;
Best Local Similarity 22.3%; Pred. No. 0;
Matches 25; Conservative 20; Mismatches 44; Indels 23;
Gaps 5;
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```
Qy 94 EHALDPVYAQKLGVNIDELLSSQPDGTGEQALEIAEALVRSGAVDIVV-
IDSVAALVPKAE 152
||| : : | : : : : ||| | : | : : | : |
Db 49 EHARNMLIEHNLRL-VAHIVKKFENTGED----
AEDLISIGTIGLIKIESYSA----- 97

Qy 153 IEGDMGDSHVGLQARLMSQALRKLSGAINKSKTIAIFINQIREKV-GVMFGN 203
| : : | : : | : | : || : || |
Db 98 -----GKGTKVATYAARCIENEIVITKGGCIHPSLIRFNIYGVRIHN 139
```

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Search completed: January 27, 2009, 15:05:51
Job time : 1 secs
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